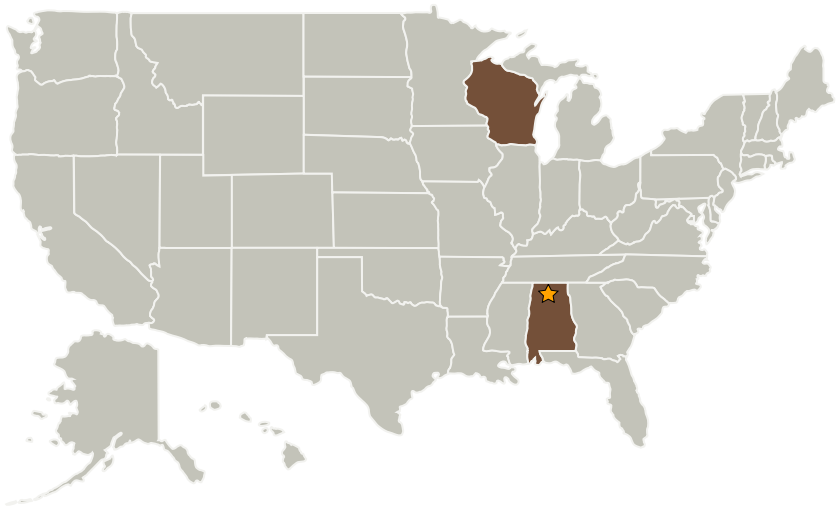
Generic ISIS Transport Module, Phase I

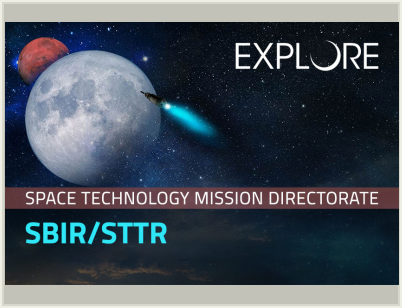
Completed Technology Project (2004 - 2004)

Project Introduction

The purpose of the Generic ISIS Transport Module is to provide a means to bring living specimens to and from orbit. In addition to living specimens, the module can be used to carry subpayloads that require precise environmental control or continuous data recording. In order to maximize the amount of science for a given mission, many biological experiments require initiation while still on the ground. In these types of experiments, it is imperative that the specimens are housed in a very precisely controlled and accurately quantified environment. The GITM has the ability to control temperature, humidity, light level, fluid level, air circulation and air exchange rate with cabin. Sensors and cameras continuously monitor the contents of the chamber and have the ability to record images. The module meets both the Single Middeck Locker interface as well as the ISIS 6 Panel Unit Interface. By meeting both interfaces, specimens within the module can be launched/returned with power on the Space Shuttle Middeck and transferred to the ISS where it interfaces with the Life Sciences Glovebox. Specimens can then be transferred to the long duration test facility for the remainder of the experiment without direct exposure to the crew.

Primary U.S. Work Locations and Key Partners





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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Marshall Space Flight Center (MSFC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Organizations Performing Work	Role	Type	Location
★Marshall Space Flight Center(MSFC)	Lead Organization	NASA Center	Huntsville, Alabama
Orbital Technologies Corporation	Supporting Organization	Industry Women-Owned Small Business (WOSB)	Madison, Wisconsin

Primary U.S. Work Locations	
Alabama	Wisconsin

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Project Manager:

Michael J Smith

Principal Investigators:

Jay M Henn
Jeffery T Iverson

Technology Areas

Primary:

- TX06 Human Health, Life Support, and Habitation Systems
  - TX06.3 Human Health and Performance
    - TX06.3.5 Food Production, Processing, and Preservation